PATENT (U.S. National Stage of PCT/JP2004/14596) Attorney Docket No.: FP3002-0036

Claims

[1] A breast pump, comprising:

a milk container main body capable of accommodating sucked mother's milk;

deformable means for providing a sealed space by contacting a breast;

a horn member disposed outside the deformable means;

space internal pressure altering means for alternately providing a negative pressure

condition and an atmospheric pressure condition in the sealed space; and

a communicating portion for connecting the space internal pressure altering means

and the sealed space, characterized in that:

the horn member is not deformed when internal pressure within the sealed space varies

and has a base end disposed near the communicating portion and an opening end disposed near

an entrance through which the breast is inserted;

the deformable means covers the inner surface of the horn member, deforms when

internal pressure within the sealed space varies, and has an attachable and detachable portion

which is attachable to and detachable from the horn member;

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the attachable and detachable portion has a base end side attachable and detachable portion to be fixed to the base end of the horn member and an opening side attachable and detachable portion to be fixed to the opening end of the horn member;

the deformable means has a stimulating convex projecting inwardly;

the stimulating convex is disposed between the base end side attachable and detachable portion and the opening side attachable and detachable portion; and

the horn member has atmospheric pressure condition creating means for maintaining an atmospheric pressure condition in a space between the stimulating convex and the horn member.

- [2] A breast pump as set forth in claim 1, characterized in that the stimulating convex of the deformable means is disposed in the vicinity of a curvature altering portion where a curvature of the base end of the horn member alters.
- [3] A breast pump as set forth in claim 1 or 2, characterized in that the base end side attachable and detachable portion of the deformable means is disposed between the communicating portion and the base end of the horn member.

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- [4] A breast pump as set forth in any one of claims 1 through 3, characterized in that the atmospheric pressure condition creating means is a vent opening for connecting a space between the horn member and the deformable means with the outside.
- [5] A breast pump as set forth in any one of claims 1 through 4, characterized in that a deformation guide portion for regulating a deformation direction of the deformable means is provided on the deformable means.
- [6] A breast pump as set forth in claim 5, characterized in that:

the stimulating convex is provided at a plurality of positions within the deformable means, and at least some of these stimulating convexes are opposed to each other on a first virtual line; and

the deformation guide portion is disposed on a second virtual line which crosses the first virtual line connecting the stimulating convexes provided to oppose to each other.